ALEX ROSA, McMaster University, Hamilton, Ontario
On a problem of Marco Buratti

Let $p = 2n+1$ be a prime, let L be any list of $2n$ elements, each from the set $\{1, 2, \ldots, n\}$. Marco Buratti asked whether there exists a Hamiltonian path H in K_p with $V(K_p) = Z_p$ such that the set of edge-lengths of H comprises L. He conjectured that the answer is yes for every list L.

We present some initial ideas, approaches and results towards the complete solution of Buratti's conjecture. We also suggest an extension of Buratti's conjecture for the case when p is any natural number.